

REMARKS/ARGUMENTS

The Office Action mailed June 13, 2005, has been received and reviewed. Claims 1, 3-5, 8-14, and 16-31 are currently pending in the application. Claims 1, 3-5, 8-14, 16-28, 30, and 31 stand rejected. Claim 29 has been objected to as being dependent upon a rejected base claim, but the indication of allowable subject matter in such claim is noted with appreciation. Applicants have amended claims 1, 3, 5, 8, 11, 14, 16-20, 23, 24, 30, and 31, canceled claim 29, added new claims 32 and 33, and respectfully request reconsideration of the application as amended herein.

Explanation Of Amendments

Independent claims 1 and 14 have been amended to recite that the insulating material consists essentially of at least one cured elastomer, vapor-grown carbon fibers, at least one secondary polymer, at least one tackifier, at least one antioxidant, carbon black, at least one cure activator, at least one cure accelerator, and at least one cure agent. This amendment substantially incorporates the subject matter of claim 29, which was indicated by the Examiner as being allowable. In addition, the amendment inserts the phrase “at least one” in front of many of the recited ingredients of the insulating material and changes the transitional phrase to “consists essentially of.” Support for the amendments is found in the as-filed application at at least paragraphs [0025], [0029], [0030], [0046], and [0056] and in claim 29. Claims 3, 5, 8, 11, 16-20, 23, 24, 30, and 31 have been amended to correct grammatical errors, to improve antecedent basis, and/or to more positively recite method limitations. No new matter has been added.

New claims 32 and 33 have been added to recite that the insulating material or composition further includes at least one of at least one plasticizer, at least one processing aid, at least one pigment, at least one bonding agent, carbon fibers, polybenzoxazole fibers, polybenzimidazole fibers, aramide fibers, ceramic clay, and talc.

35 U.S.C. § 102(b) Anticipation Rejections

Anticipation Rejection Based on Japanese Patent No. JP 08-127674 in View of U.S. Patent No. 4,663,065 to Herring

Claims 1, 8, 10, 11, 14, 19, 20, and 23-25 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Japanese Patent No. JP 08-127674 to Kazuo *et al.* (“Kazuo”) in view of U.S.

Patent No. 4,663,065 to Herring (“Herring”). Applicants respectfully traverse this rejection, as hereinafter set forth.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989).

Kazuo discloses an antistatic rubber composition that includes a natural or synthetic rubber, a silica filler, and vapor-grown carbon fibers. Kazuo at the Abstract. The silica filler provides reinforcement to the rubber composition, which is oilproof and acid resistant. *Id.* at paragraphs [0005]-[0009], [0025], and [0033]-[0037]. The vapor-grown carbon fibers provide antistatic and spark-proof properties to the rubber composition. *Id.* at paragraphs [0025], [0026], and [0038]-[0051].

The Examiner relies on Herring as disclosing that silica is inherently a flame retardant. Office Action of June 13, 2005, p. 2.

As amended, claim 1 recites an insulating material for a rocket motor that consists essentially of at least one cured elastomer, vapor-grown carbon fibers, at least one secondary polymer, at least one tackifier, at least one antioxidant, carbon black, at least one cure activator, at least one cure accelerator, and at least one cure agent.

Kazuo does not anticipate claim 1 because Kazuo does not expressly or inherently describe that the insulation material “consists essentially of at least one cured elastomer, vapor-grown carbon fibers, at least one secondary polymer, at least one tackifier, at least one antioxidant, carbon black, at least one cure activator, at least one cure accelerator, and at least one cure agent.” Rather, the rubber composition of Kazuo includes a natural or synthetic rubber, silica, and vapor-grown carbon fibers. Since the rubber composition of Kazuo includes silica, this rubber composition does not consist essentially of the ingredients recited in claim 1.

Since Kazuo does not expressly or inherently describe each and every element of claim 1, claim 1 is allowable.

Claims 8, 10, and 11 are allowable, *inter alia*, as depending from an allowable base claim, specifically claim 1.

Claim 14 recites a method for making an insulating material for a rocket motor. The method comprises providing a composition that consists essentially of at least one crosslinkable polymer, vapor-grown carbon fibers, at least one secondary polymer, at least one tackifier, at least one antioxidant, carbon black, at least one cure activator, at least one cure accelerator, and at least one cure agent. The vapor-grown carbon fibers are dispersed in the at least one crosslinkable polymer. The at least one crosslinkable polymer is crosslinked to form a cured elastomeric insulating material having the vapor-grown carbon fibers dispersed therein.

Since claim 14 recites a composition that includes substantially the same ingredients as recited in claim 1, claim 14 is allowable for substantially the same reasons as claim 1.

Claims 19, 20, and 23-25 are allowable, *inter alia*, as depending from an allowable base claim, specifically claim 14.

35 U.S.C. § 103(a) Obviousness Rejections

Obviousness Rejection Based on Kazuo in View of Herring

Claims 3-5, 9, 12, 13, 16-18, 21, 22, 26-28, 30, and 31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kazuo in view of Herring. Applicants respectfully traverse this rejection, as hereinafter set forth.

M.P.E.P. 706.02(j) sets forth the standard for an obviousness rejection:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The obviousness rejection of claims 3-5, 9, 12, 13, 16-18, 21, 22, 26-28, 30, and 31 is improper because the cited references do not teach or suggest all of the claim limitations and do not provide a motivation to combine to produce the claimed invention.

The teachings of Kazuo are as previously described.

Herring teaches an elastomeric insulation composition that includes a crosslinkable elastomer polymer and a char forming organic particulate. Herring at column 2, lines 18-24. The elastomeric insulation composition also includes a curing system, an inorganic filler, such as silica or antimony oxide, chlorinated organic compounds, and liquid polybutadiene. *Id.* at column 3, lines 3-44.

Each of claims 3-5, 9, 12, 13, 16-18, 21, 22, 26-28, 30, and 31 depends directly or indirectly from claim 1 or from claim 14 and, therefore, includes all of the limitations of claim 1 or of claim 14. The cited references do not teach or suggest all of the limitations of claim 1 because Kazuo and Herring, when combined, do not teach or suggest that the insulation material “consists essentially of at least one cured elastomer, vapor-grown carbon fibers, at least one secondary polymer, at least one tackifier, at least one antioxidant, carbon black, at least one cure activator, at least one cure accelerator, and at least one cure agent.” Kazuo does not teach or suggest this limitation for substantially the same reasons as discussed above in the anticipation rejections. Specifically, Kazuo does not teach or suggest that its rubber composition consists essentially of the ingredients recited in claim 1. Herring does not cure these deficiencies in Kazuo and, therefore, does not teach or suggest this limitation.

The cited references also do not provide a motivation to combine to produce the claimed invention. To provide a motivation or suggestion to combine, the prior art or the knowledge of a person of ordinary skill in the art must “suggest the desirability of the combination” or provide “an objective reason to combine the teachings of the references.” M.P.E.P. § 2143.01. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *Id.* (emphasis in original). However, the Examiner has provided no motivation to combine Kazuo and Herring to produce the claimed invention.

As such, each of claims 3-5, 9, 12, 13, and 26-28 is allowable, *inter alia*, as depending from claim 1. In addition, each of claims 16-18, 21, 22, 30, and 31 is allowable, *inter alia*, as depending from claim 14.

Objection to Claim 29/Allowable Subject Matter

Claim 29 stands objected to as being dependent upon a rejected base claim, but is indicated to contain allowable subject matter and would be allowable if placed in appropriate independent form. Applicants have amended independent claims 1 and 14 to recite, *inter alia*, the subject matter of claim 29 and, therefore, respectfully submit that claims 1 and 14 are allowable.

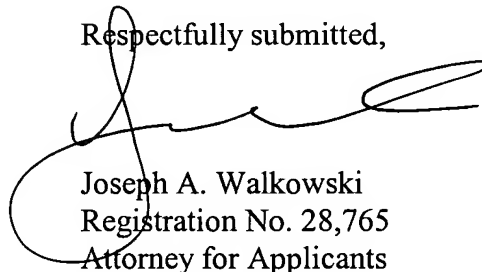
ENTRY OF AMENDMENTS

The amendments to claims 1, 3, 5, 8, 11, 14, 16-20, 23, 24, 30, and 31 should be entered by the Examiner because the amendments are supported by the as-filed specification and drawings and do not add new matter to the application.

CONCLUSION

Claims 1, 3-5, 8-14, 16-28, and 30-33 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain that might be resolved by a telephone conference, she is respectfully invited to contact Applicants' undersigned attorney.

Respectfully submitted,



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